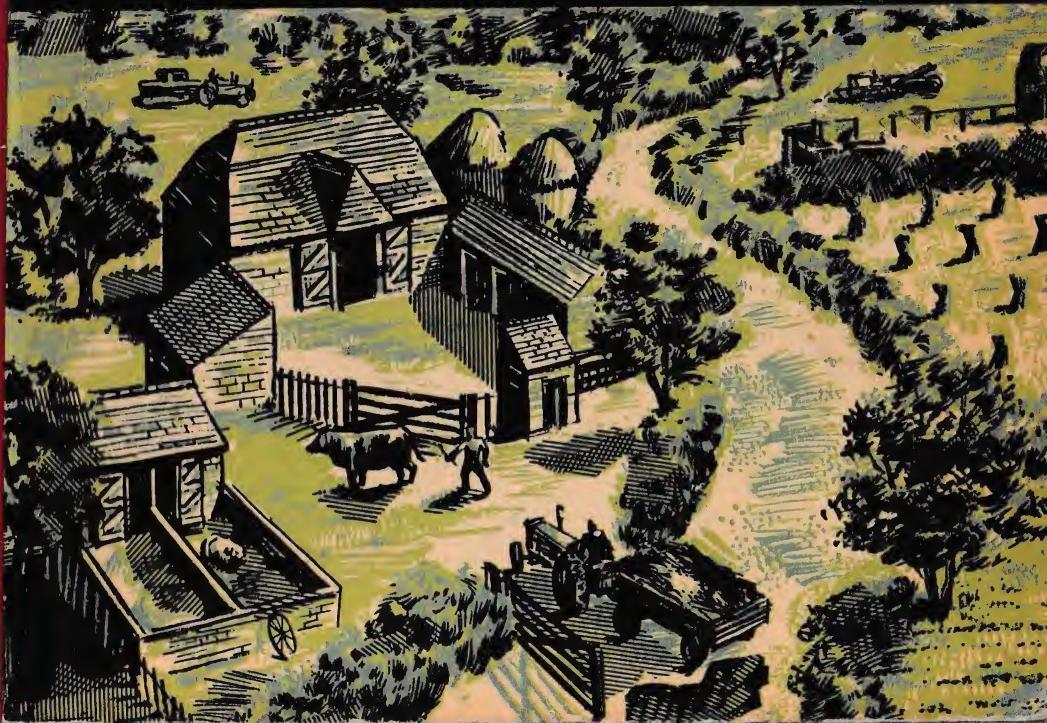


LONGMANS COLOUR GEOGRAPHIES
UNIT 2

Farms of Britain



LONGMANS COLOUR GEOGRAPHIES

by

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MAPS BY
RIC WYLAN

Unit 2

F FARMS OF BRITAIN

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LONGMANS

F FARMS OF BRITAIN

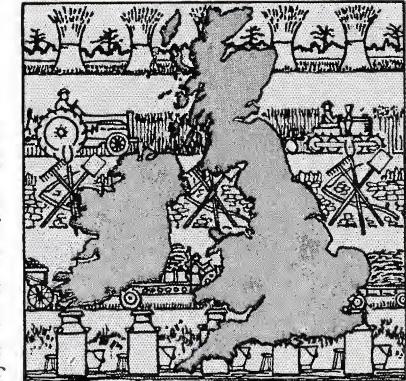
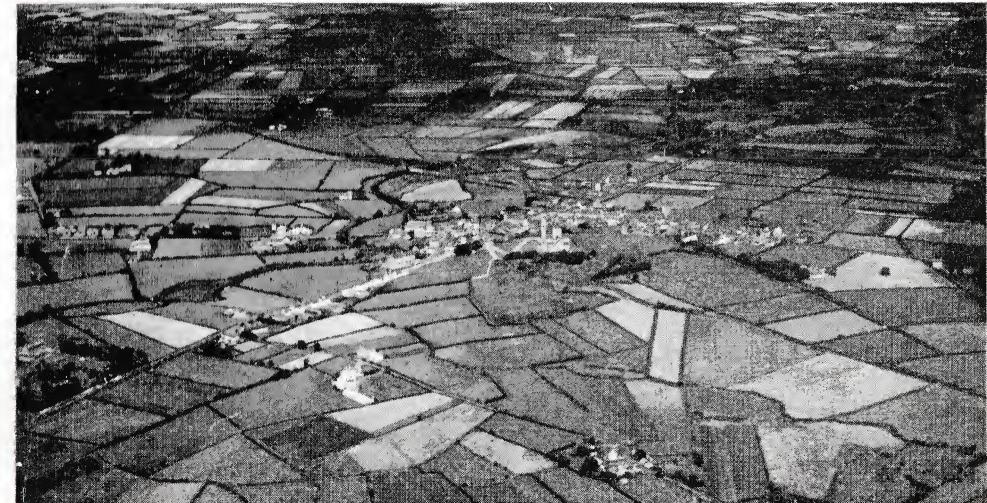
TOWN AND COUNTRY

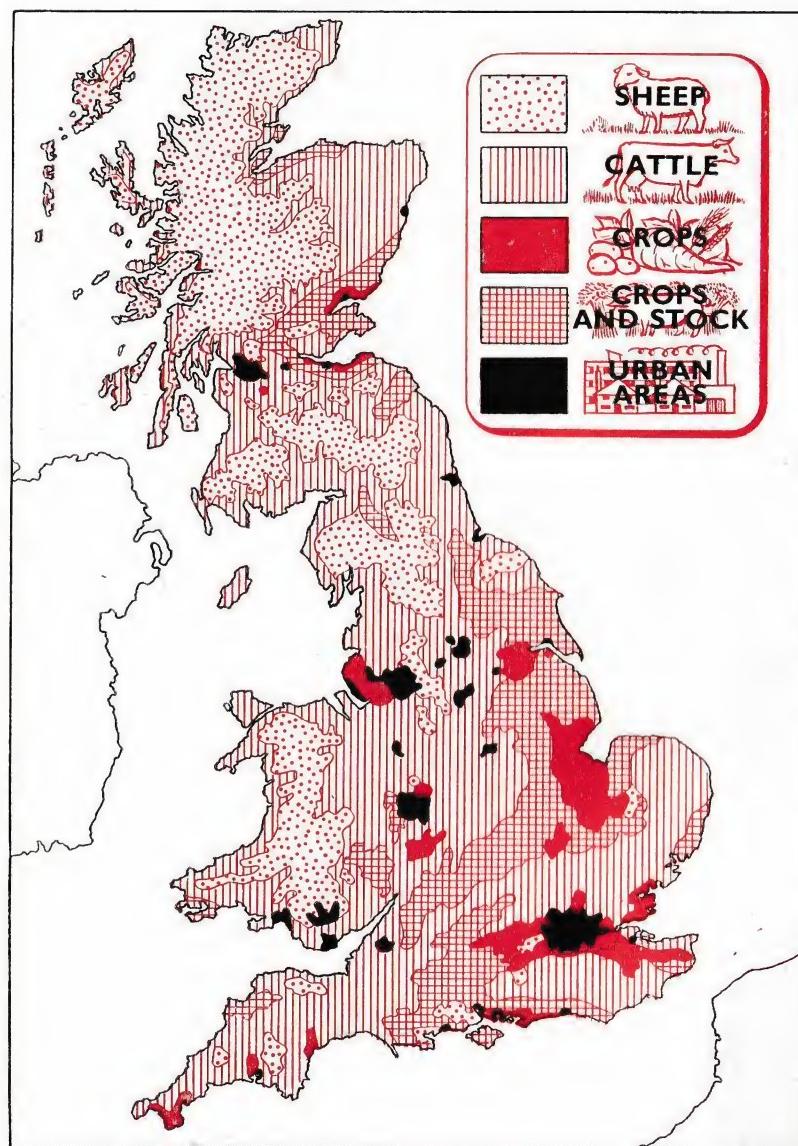
SO many people in Britain live in towns and spend their lives amidst streets and houses, shops and factories, that it is easy to forget that these cover only a small part of the land. The traveller by aeroplane soon learns the truth. He can see how far the great cities and factory towns extend, but he sees too the very much wider spaces of countryside surrounding them. Quite nineteen-twentieths of Britain is countryside.

From an aeroplane the towns look like dark islands scattered over the land. The country around them looks very different in different parts of Britain. In Wales and Scotland and northern England there are broad stretches of mountain and moor. These are broken by deep valleys, pointing like fingers up into the dark brown moorlands. Flying over these uplands you will see few buildings; a small huddle of houses where some village shelters in the valley or a lonely farmhouse on the hillside.

On the lower hills of the western lands and stretching far across the Midland Plain of England the country looks very different. Everywhere there are fields, usually separated from

i. The village is an island in a sea of fields.





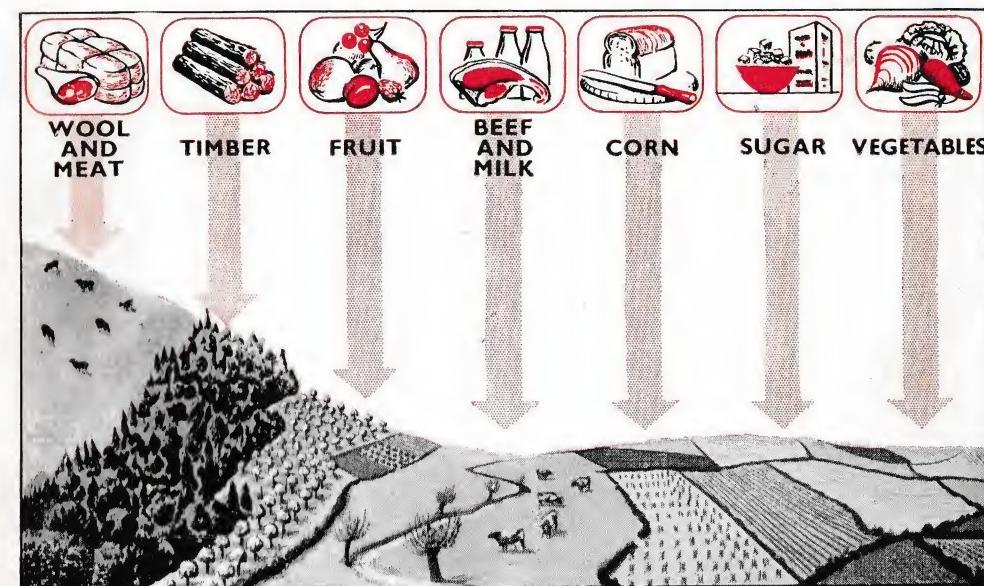
2. FARM PRODUCTS OF BRITAIN.

one another by tree-lined hedges. Every group of fields has its farmhouse with barns and haystacks. Villages are larger and there are more of them. This is a green land of grass fields.

As the aeroplane flies eastwards towards the North Sea, the traveller will see that the pattern of the countryside becomes more varied. Fields become larger and more rectangular and are often divided by wire fences instead of the stone walls of the moorlands and the hedges of the grass counties. The country looks like a patchwork quilt of greens and yellows and browns. In winter the freshly ploughed soil shows brown or red between the green fields of grass or winter crops. In summer the yellow cornfields stand out against the dark green fields of root crops.

Away from the mountains and moors most of the land in Britain is parcelled out into fields, each being used for a particular purpose. In one field there grows a grain crop—wheat or barley or oats; in the next, cows are grazing the growing grass; in a third the grass is being left to grow tall until it is ready to be cut for hay. Each field is separated from its neighbours and from the lanes and roads by hedges, fences, ditches or walls.

3. FROM MOUNTAIN TO VALLEY. Farm produce varies with the situation of the land.



These fields have a long history. Many of them were first marked out hundreds of years ago. Most girls and boys know the old rhyme about Little Boy Blue who fell asleep among the hay. It tells of the time when there were neither hedges nor fences to keep the sheep out of the meadows and the cows out of the corn growing in the open fields. The trees in the hedgerows tell of a still earlier time when most of lowland Britain was covered with woods. The first fields had to be made by clearing away the trees and the bushes that grew on the land.

Before crops can be grown in the fields, the soil must be broken up and the wild plants destroyed. The plough was invented to do this work. At first it was drawn by oxen and then by horses; now it is drawn by a tractor. All the fields growing crops, whether of grain or potatoes or roots, have been ploughed during the year. Land that is ploughed regularly is called *arable* land.

But many of the fields have clearly not been ploughed this year. Most farms have some grass fields in which sheep or cattle or horses graze. These may have been ploughed and sown with grass last year or the year before, but many of them have been grass fields for many years. These fields form a very large and important part of the farmland of Britain. The animals feeding on them provide half the meat and all the milk for the people of Britain.

4. West Country farm lands in Shropshire, a county of trees and pasture.



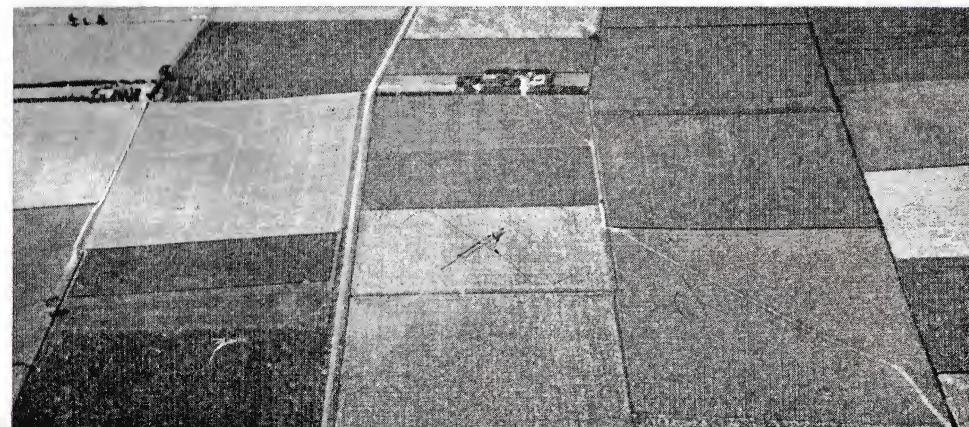
ROUND THE FARM

WHAT is a farm? It is much more than a few acres of land used for the feeding of animals and the growing of crops. There must be a farmer and his helpers to work the land. The farmer's work is done in his fields and is very different from that of the worker in the factory. A walk round any farm will soon show this.

Most of the differences arise from the fact that the farmer is concerned with living things. Anyone who has kept a pet animal or a garden knows how difficult it is to take a holiday. Domestic animals and cultivated plants cannot be left to look after themselves for long. The members of the farmer's family must all be prepared to do small but necessary tasks, like feeding the hens, that would take up the time of the skilled workers. They must be ready too to join in urgent tasks such as haymaking while the weather is fine. So you will find the farmhouse as near as possible to the fields, and the workers' houses not far away.

The farmhouse is the farm office as well as the farmer's home. It is the place from which all the work of the farm is directed. Around it are many other buildings. The farm animals spend most of their time in the fields but they need shelter and attention from time to time. So there are sheds for the cows, stables for the horses, and houses for pigs and poultry. Barns hold stores of straw for their bedding, and of hay and corn for their feed. There is also an implement shed where the tools and machines used on the farm can be kept dry and in good condition. All these

5. Eastern farm lands, on the fens of Lincolnshire, a county of crops.

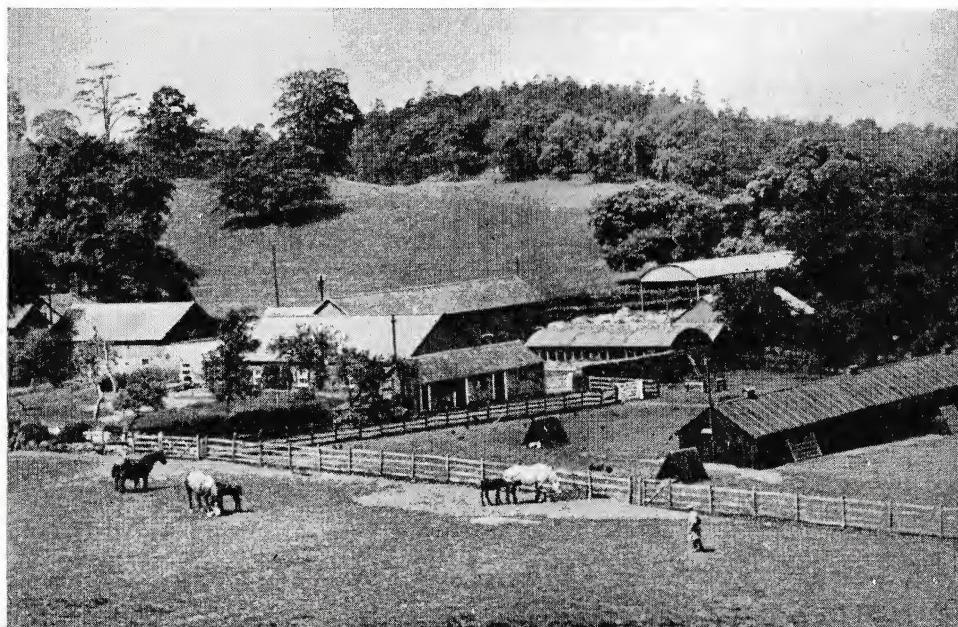


buildings are near the farmhouse and close to one another to save the time and labour of the workers.

Agriculture—the production of meat and milk, corn and grass, is not at all like industry—the production of cloth or chairs, engines or bridges. In the first place most agricultural work must be done out of doors and during daylight. Now the British farmer can rarely be sure what to-morrow's weather will be. He plans, perhaps, to plough the Ten Acre field or mow the hay in Long Meadow. But if he wakes to a wet morning and neither of these jobs can be done, he must plan again and turn his workers to other tasks.

Just as the farmer cannot control the weather so he cannot change his land, though he can increase its fertility. The soil largely settles what he can do with his fields. He cannot grow a profitable crop of wheat on a sandy soil, and it is too risky to sow that clayey field by the river that is always flooded after heavy rain. Some of his fields may be too stony or too steep to plough and so must be left to grass. In the eastern counties the farmer can usually count on harvesting a profitable grain crop. But too much rain in the summer or at harvest time may turn his expected profit into loss. On the other hand, if there is too little rain the

6. Round this farmhouse in Staffordshire there are many sorts of buildings—for horses, cattle, pigs and poultry as well as barns for crops and stores of winter feed.



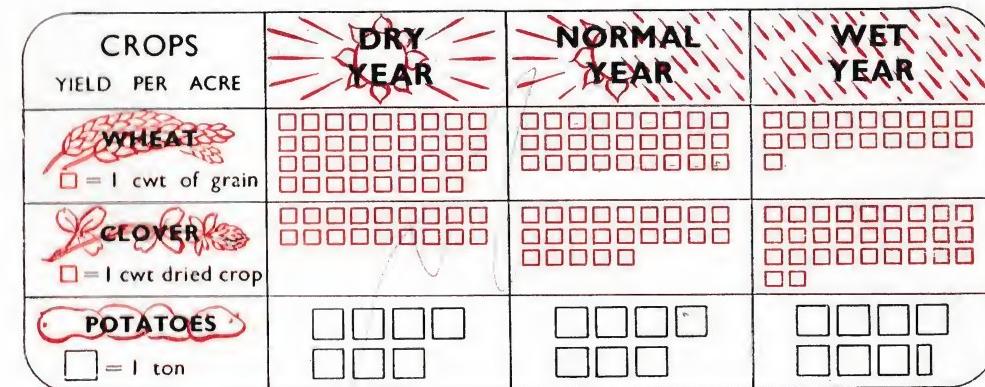
grass crop will be poor and thus reduce the yield of milk from his dairy cattle or the number of young bullocks he can fatten for the butcher. So the British farmer must plan how to get most out of his farm without "putting all his eggs in one basket."

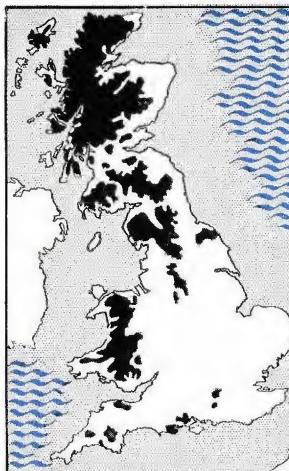
The factory can usually change its output quickly by switching workers and machines from making one sort of article to another or increasing the working hours of men and machines. But this cannot be done by the farmer. He cannot in Britain make hay in March or gather apples in December. If he has sown a field with wheat he cannot change it over to sugar-beet until next season. Nor will the cow give another calf until next year. So the farmer must always be planning for at least a year ahead, always remembering that the weather may rob him of some of the profit he hopes to make.

Visit a local farm and make a rough plan of its fields showing for what purpose each field is being used. Find if you can why each field is used in the way shown.

Cash crops are those sold off the farm. *Forage or fodder crops* are grown to feed the animals of the farm. Find local examples of each type.

7. WEATHER AND CROPS. The diagram shows why the British farmer mixes his crops. Wheat does well in dry sunny summers; clover does well in dull, wet years; potatoes are suited by most years but do rather better when there is little sun and a good deal of rain.



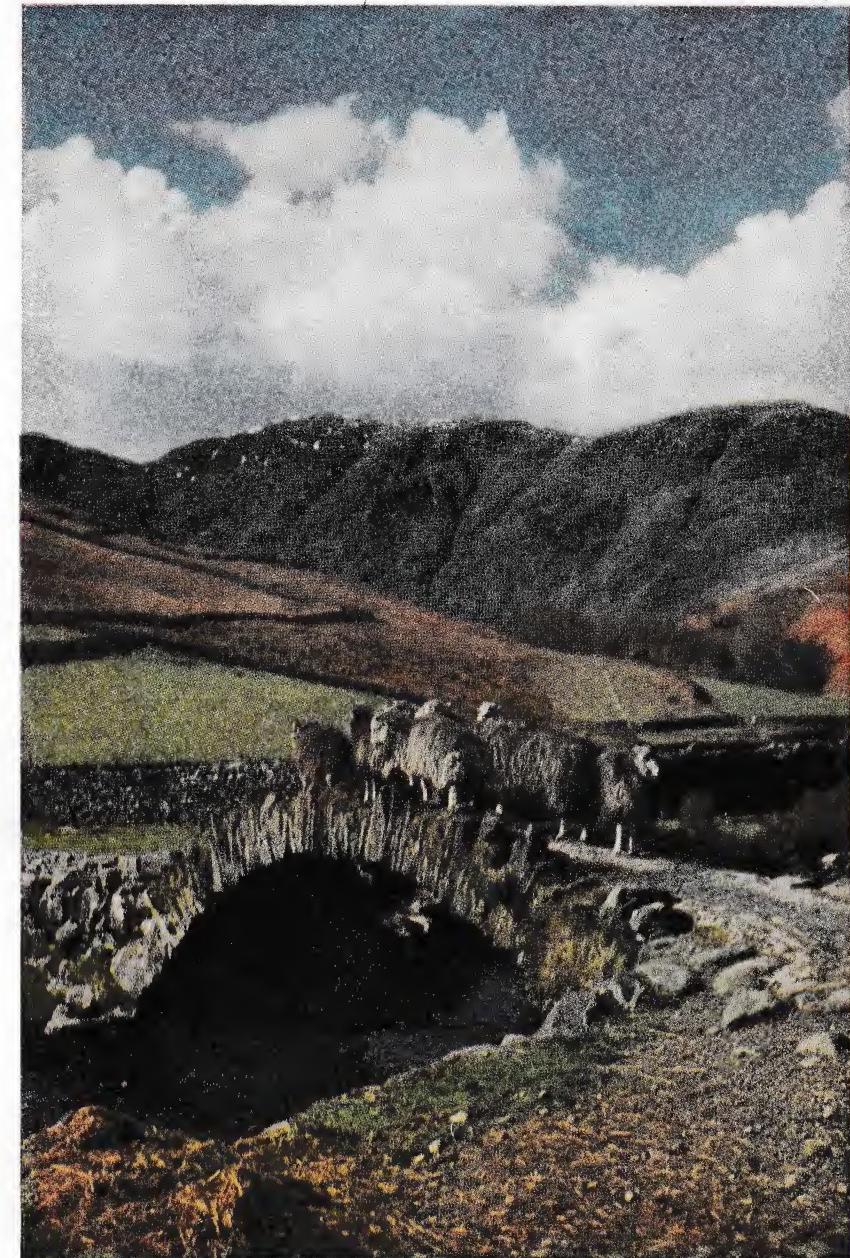
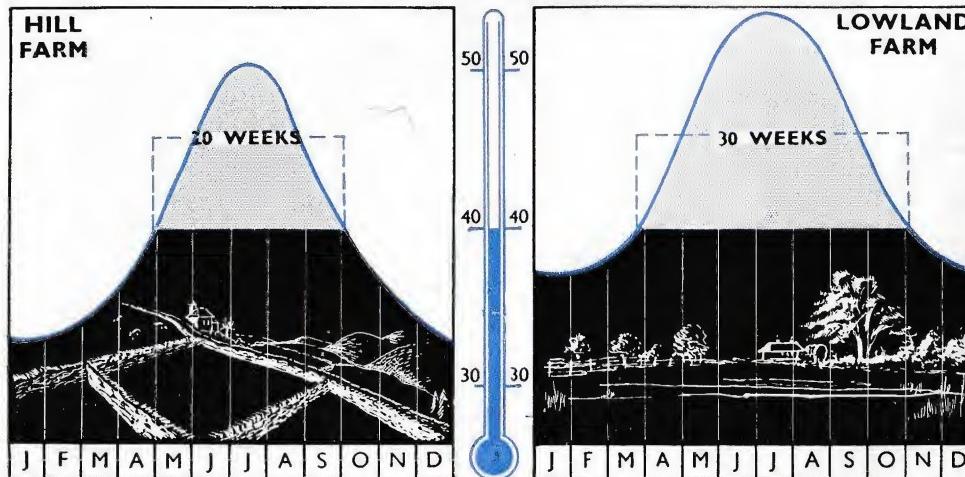


THE HILL FARM

THE mountains and moorlands that cover more than a quarter of Britain are in the west and north and would seem to be quite useless for farming. Because of their height they are cooler and there is more rain and less sunshine than in the lowlands. The frequent and heavy showers have washed much of the plant food out of the soil and left it sour. The mountain sides are too steep to plough. No useful crops can be grown under these conditions and the heather and coarse grasses provide poor food for animals. Yet these lands are important to British farming.

To visit the hill farmer you must take a long bus journey to some little market town in a valley on the edge of the hills. From the town you follow a road up the valley and will have to do so on foot unless you can find a place on a school bus. Even from the bus stop, you may have to walk a mile along a rough lane before you reach the farm. A stream gurgles down the valley and the land rises steeply on either side. The lower slopes are divided

8. The blue lines show how temperatures change from month to month. The lowland farm has ten weeks more growing weather than the hill farm.



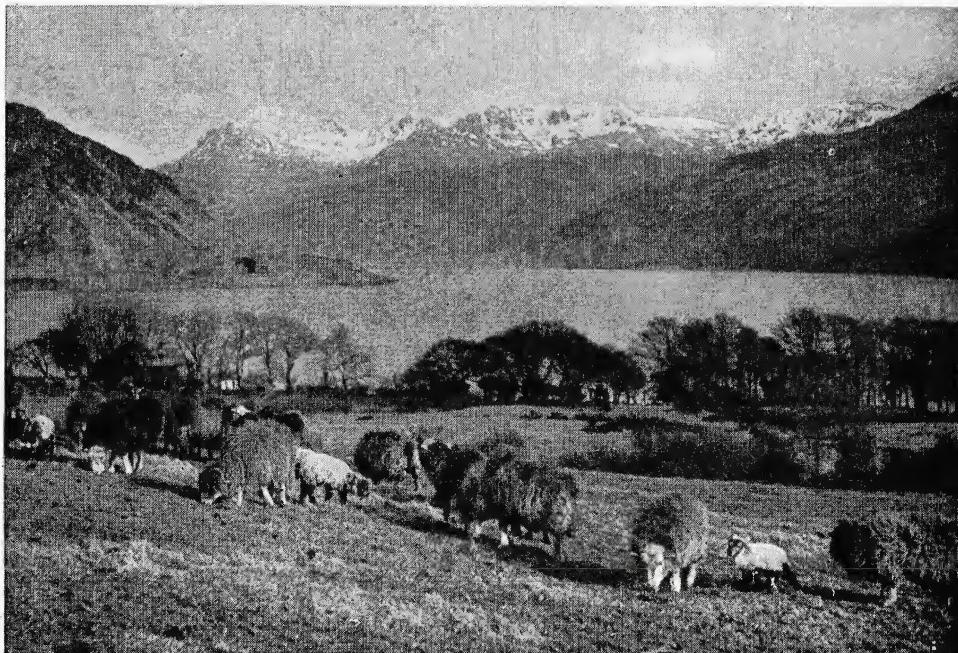
9. SPRING IN THE LAKE DISTRICT (Wastdale).

into small fields, separated by stone walls, built without mortar. Higher up, the fields are huge but their grass generally looks brown rather than green. These rough pastures make up most of the farm. On the hilltops the moorlands are covered with heather and unbroken by wall or fence.

The house is usually a low building with a stout roof of stone slabs or slates. Its windows are small and few, and there is only one door: the house is planned to keep out wind and rain. Out-buildings are few—a shed for two or three cows and a single horse, an open cartshed, a shed for coal and perhaps some peat from the moor. A small haystack is carefully fenced away from the farm animals. Water is got from a spring or from the stream.

Some of these hill pastures are grazed by hardy cattle or by sturdy ponies, but most of them by sheep, for the hill farmer makes a living chiefly by the sale of sheep and lambs and their wool. His lands may cover two or three thousand acres and carry five or six hundred ewes and their lambs. Only such active animals as sheep could find enough food on the moors. Heather shoots are their main food. The shepherd often burns a patch of moor so that young heather shoots will spring up. The bracken and most of the moor grasses are useless.

10. These sheep and their lambs are still, in early May, out on the valley pastures of Ennerdale in the Lake District. As the snows melt they will move to higher ground.

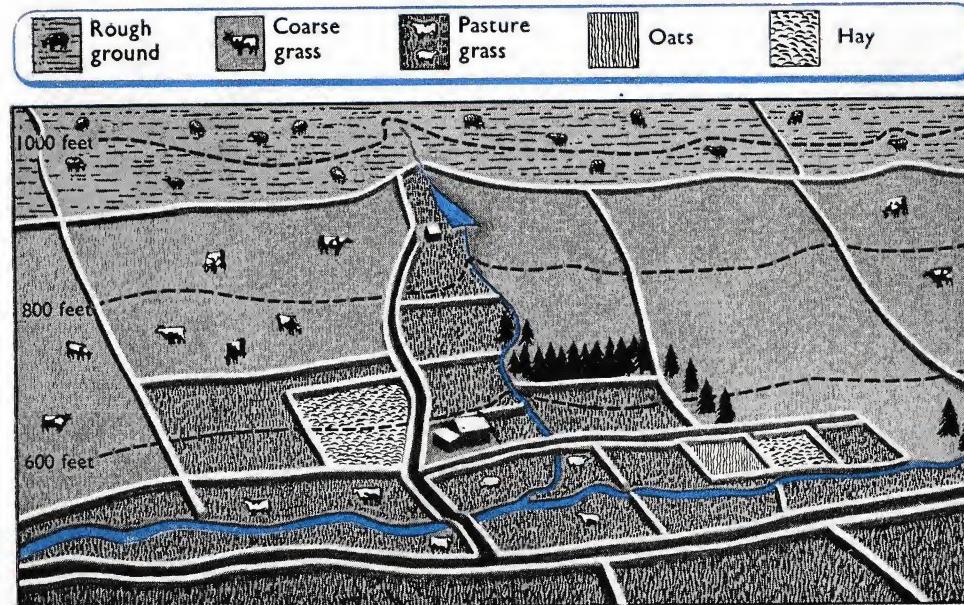


The shepherd lives a strenuous life. In April, lambing begins. The sheep have been high on the hills during the night and the shepherd climbs to meet them at daybreak. Some of the newborn lambs may have died and the shepherd must persuade their mothers to adopt a twin or an orphan lamb. Some of them may be very weak and must be carried down to his hut and bottle-fed for a time. In snowy or very rainy weather, lambs may have to be rescued from snowdrift or stream. Every day the flock must be counted and sick sheep found and cared for.

In June or July the sheep are washed and then clipped, while the lower fields are mowed for hay as soon as the weather allows. In August and September the farmer sorts out the lambs and the older ewes that he does not wish to keep any longer. These he takes to the sales in the market town. The lowland farmers buy the lambs—to fatten on roots and green crops for the butcher, and the ewes—to breed more lambs for their grass fields.

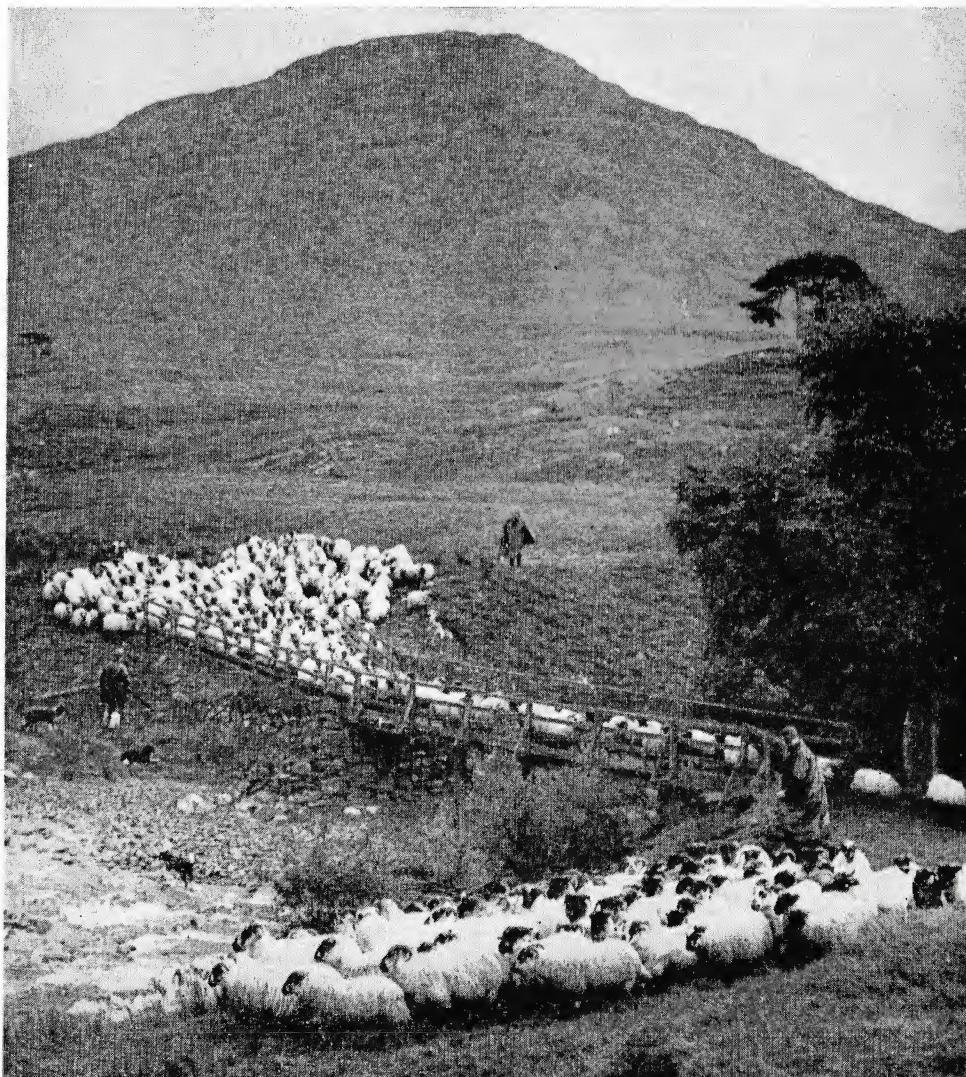
In October the sheep are dipped, to kill insect pests. The ewe lambs are sent to the lowlands for the winter but the main flock remains on the moors. If snow threatens, the shepherd stops the

II. FIELD PLAN OF A HILL FARM.



sheep from climbing to the higher ground and sees that they do not settle for the night in places where they may be buried in the snow. If they are buried the dogs can usually find them and then the shepherd must dig them out. If the snow lies deep or freezes so hard that the sheep cannot scrape it away and reach the pasture underneath, the shepherd must bring up some of his precious hay to keep them alive until the ground is clear again.

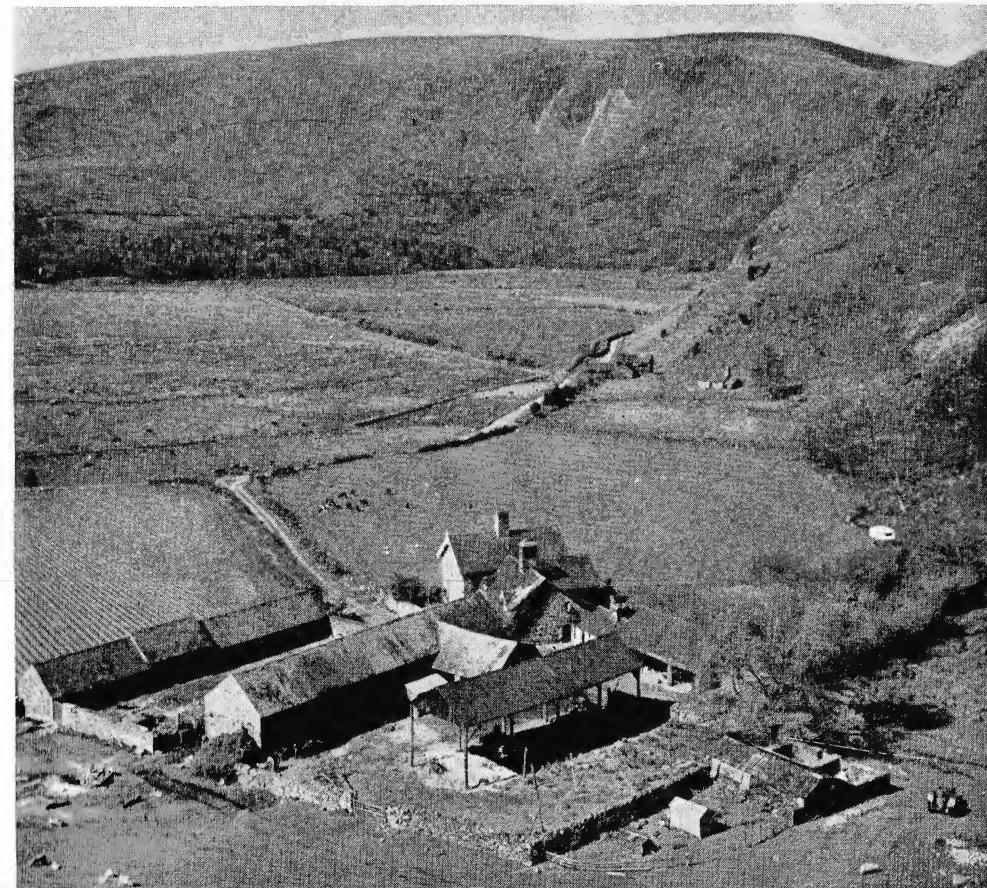
12. In late September the sheep are brought down before snow covers the moorland pastures of the Scottish Highlands. How many of the very well trained sheepdogs can you see?

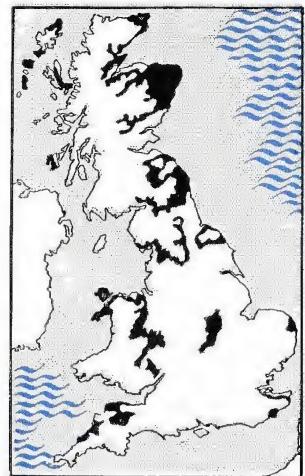


Most hill farmers keep two or three cows, to provide milk for the calves and for the family. They will keep a calf for about a year, giving it milk when very young and then rearing it on the better pastures of the lower slopes. Thus the calf grows into a healthy and hardy young beast. The young cattle, like the lambs, are sold to the lowland farmers, who are always eager to strengthen their herds and flocks with healthy stock from the hills. The more grass pasture the hill farmer has, the more young cattle he can raise. Where the land is suitable he will grow oats or turnips to help in their feeding. So on the lower farms cattle become more important than sheep, especially if the farmer can send milk to a town.

Make a calendar for a hill farmer like the one on page 28.

13. Young cattle graze on the rough pasture and dairy cows on the better grass near this Welsh hill farm. The small enclosure by the farmyard contains a few pigs and poultry.





FARMING FOR BEEF

BRITAIN has long had a reputation for the excellence of her farm animals. The great sheep flocks of Australia, New Zealand and Argentina have mainly been raised from British breeds. The herds of cattle on the grasslands of the United States and South America are mainly descended from stock shipped from Britain. Buyers from all the great stock-rearing lands of the world attend the shows and sales and seek the best types to keep up the quality of their flocks and herds. Why is this? Largely because the British climate encourages the growth of good grass pastures.

Away from the mountains and moorlands there are many farms made up almost entirely of grass fields. These farms are usually fairly small and divided into a number of quite small fields. The farmhouse in the midst of them is not much bigger than that of the hill farmer, but it has more outbuildings, bigger barns for the storage of cattle food, more shelter for cattle and often a number of enclosed yards. As a few of the fields are cultivated there are more implements than on the hill farm.

14. These young Hereford cattle are being reared on rough grazing land high up on a Welsh mountain. Lowland farmers will fatten them on richer pastures.



It is not because the soils are poor that these farms are under grass. The soil is often rich and deep and many of the fields have carried grain crops in the past. They are kept for the feeding of cattle because that gives a greater profit than crops. All land is not equally suitable for this type of farming. Grass is a leafy plant that needs a good supply of water, but the rainy western hills are not the best grazing country. They have too little sunshine, and it is the sun that makes grass sweet and nourishing. Grasses make little growth when the temperature falls below about 43° F., so this is another reason for avoiding the higher and more northern counties where spring comes late and winter sets in early.

The best pastures are those in Leicestershire and Northamptonshire and along the valleys of the rivers draining to the Wash. On about one acre of these a lean bullock will get fat before the end of the summer with no other food. Lands that were formerly marsh but have now been drained, as in Lincolnshire, on Romney Marsh in Kent, and in Somerset, also make good pasture as they do not dry out in summer. Lands near the hills but sheltered from the heaviest rains, as in eastern Scotland, Northumberland and Herefordshire, also have famous pastures.

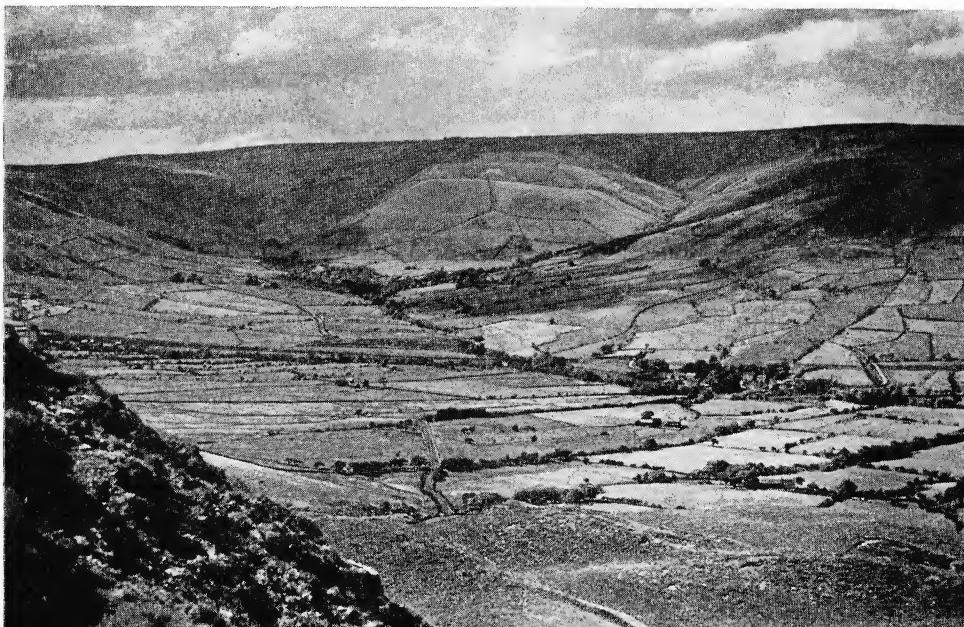
15. This is the stockyard of an old type farm in Gloucestershire. Young bullocks are being fattened for slaughter.



The skill of the farmer is shown in the way in which he uses these lands. Not all the common grasses provide nourishing feed. On newly-sown pastures the farmer can choose a mixture of what suits his beasts best—perennial rye grass and wild white clover and timothy perhaps. On old pastures the farmer can encourage the growth of the best grasses by grazing at the right time and by keeping the right number of beasts in each field. If he puts in too many animals they will soon eat down the good grasses and give the creeping weeds a chance to spread. If he puts too few, the good grasses will grow old and lose much of their food value while the weeds will seed. That is the reason for the old saying that "one bullock will starve where two would fatten".

The grassland farmer buys young animals and fattens them for the butcher. He gets his young "stores" from the hill farmer or from Ireland in the spring, buying the number suited to the size of his farm. If there are more showers than usual, the grass will grow more rapidly and he will buy more beasts, or he may shut up a field or two for hay. If the summer is dry and pasture is scanty he must buy oil-cake or other feed. If he can make a good stock of hay during the summer or can grow fodder crops on a few of his fields then he may be able to buy more young cattle in the autumn. These he will feed during the winter with the hay.

16. In this view of Edale and the Peak in Derbyshire, note the changes from open moorland, to big hill pasture fields and then to small valley enclosures for hay and crops.



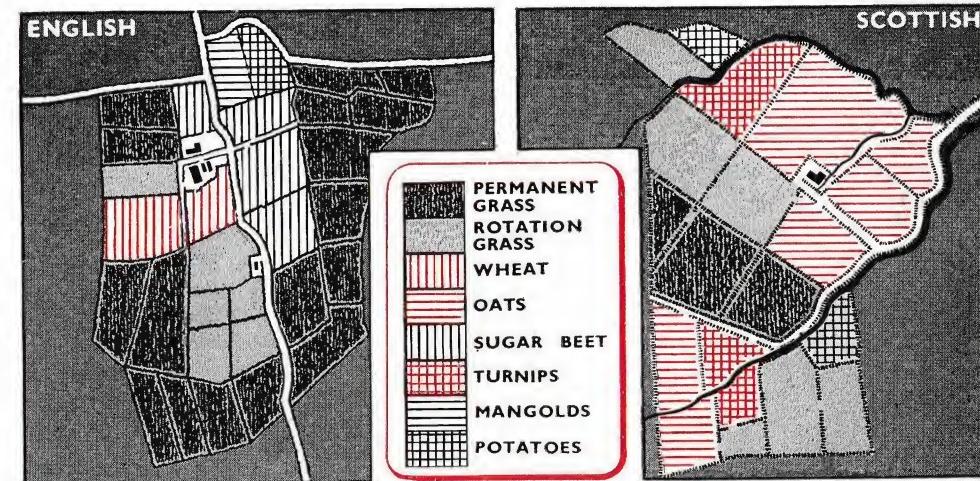
carterd to them in the fields, or with root crops and kale in the stockyards, where they have some shelter from the weather.

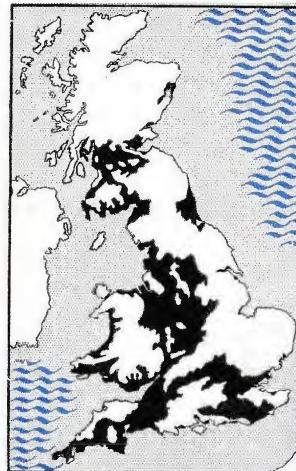
Some breeds of cattle are more suitable than others for the production of beef. They fatten more quickly and give more tender meat with less bone. Among the best of the beef breeds are the black, hornless Aberdeen-Angus, the white-faced Hereford, the red and white Shorthorn and the red Devon. These are the types that have been sent to stock the great ranches overseas.

On English farms it is usual to fatten cattle on the rich summer pastures, though a smaller number of cattle are fattened in winter in the stockyards. In north-eastern Scotland winter fattening is the more usual practice. The farms there are divided about equally between grass and crops, but all the fields are ploughed in turn. After a field has been three years under grass, crops are grown on it for the next three years, largely root crops such as swedes. On these forage crops and hay the beasts are fattened during the winter. This practice of "turn-about" farming has become more common in England too during recent years.

Explain to a townsman why *grass* is the most important *crop* on many farms.

17. FIELD PLANS OF ENGLISH AND SCOTTISH STOCK FARMS. What are their main differences? What is the meaning of "turn-about" farming?

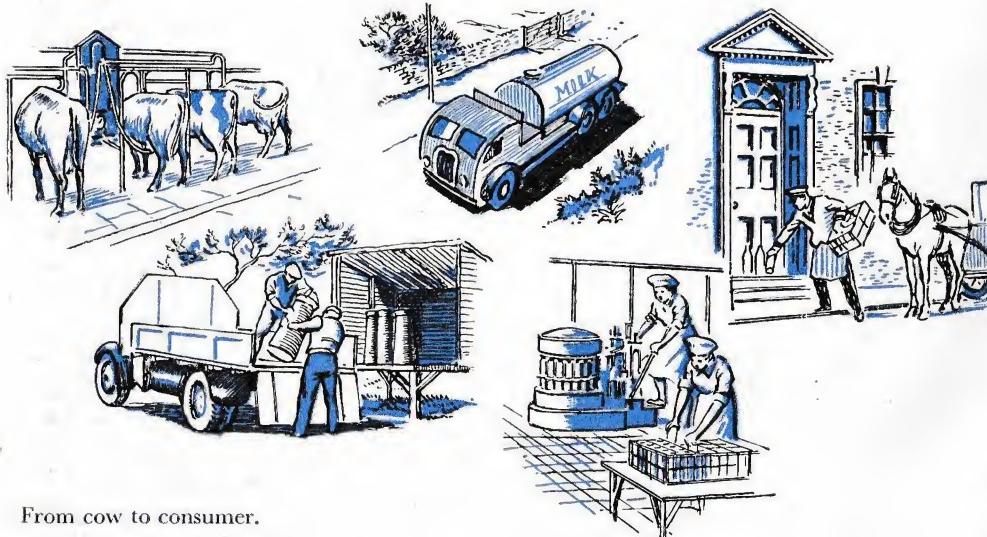




THE DAIRY FARM

EVERY year about three million cattle from British farms are slaughtered for beef. To keep up the great number of beef cattle there must be millions of cows to produce calves. But when a cow gives birth to a calf she also starts to produce milk, the only food a young calf can take. Farmers found out long ago that the young calf could soon be taught to take other foods, and that the cow would go on producing milk which could then be used for human food. Some months after the birth of the calf, however, the cow "goes dry", that is, she stops producing milk until she gives birth to another calf. So plenty of milk to drink depends on plenty of calves being born, and these calves in turn maintain the beef herds. Nowadays over a quarter of all the money earned by British farmers comes from the sale of milk and another quarter from the animals sold for slaughter.

The very earliest farmers in Britain kept some cattle. They fed on the uncultivated common lands outside the village fields. As their feeding was poor even in summer and very scanty in winter, they were small, thin beasts and gave very little milk.



From cow to consumer.

Their calves were all born in the spring and early summer and the cows gave milk for only about six months.

About three hundred years ago farmers found out that the milking season could be made longer by providing better winter feed. This they did by making more hay and by growing new crops—clover and turnips—which provided winter supplies. Later they found it was worth while to feed some grain to the milking cows and, later still, the use of oil-cake containing rich vegetable fats was introduced. In these ways the milking period was lengthened to about ten months. Farmers also learnt how to persuade or train their cows to bear calves at any time in the year, so that fresh milk is now available all the year round, though it is still most abundant in the season of fresh young grass.

The breeds of cattle have also been steadily improved to give bigger milk yields. Just as certain breeds have been developed for beef production, so other breeds have been raised specially as milk producers. Beef breeds give little more than the old types, but the dairy breeds give far more. An ordinary dairy cow will yield 700 or 800 gallons a year. The black-and-white Friesian cows sometimes give as much as 2000 to 3000 gallons. It is the

18. GUERNSEY COW AND CALF. Without calves there can be no milk.





19. Sheep and lambs in Wensleydale in Yorkshire. Why are the moors purplish?

GRAZING FOR FARM ANIMALS.

20. Cattle on a Devon dairy farm. Can you name the breeds?



21. This Norfolk field is being ploughed in autumn: name a probable crop to be sown.

PLOUGHED FIELDS FOR FARM CROPS.

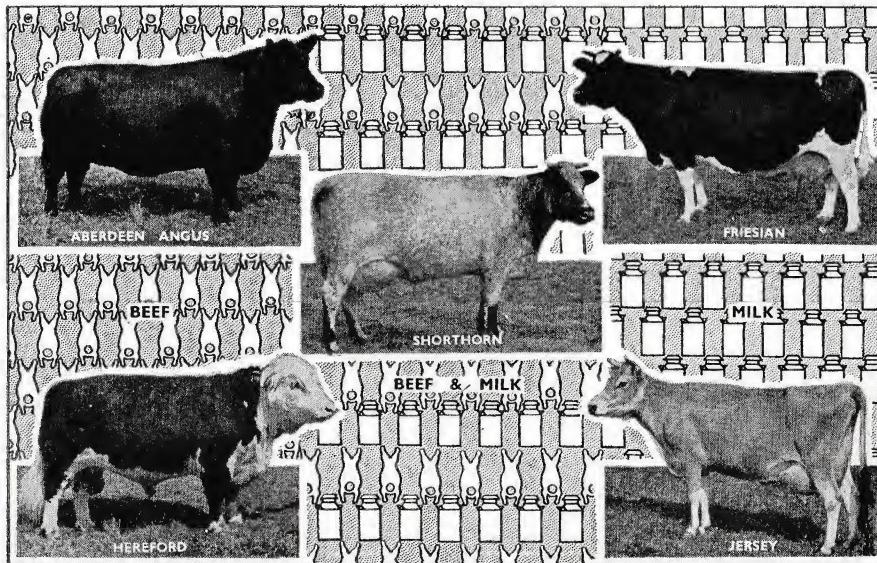
22. This field of oats in Oxfordshire is being harvested. In what month was this photograph taken? How many months is it since the field was ploughed?



most popular type on English lowland farms, while the Ayrshire breed, which you can recognize by its upturned horns, is particularly popular in Scotland as it is less affected by bad weather. About half the dairy cattle in Britain, however, are Shorthorns. This is a "dual-purpose" breed, that is, the cows give good milk yields while the male calves make good beef cattle.

As on beef-producing farms, the grass field is the foundation of the dairy farm. Good pasture is sufficient, in most parts of Britain, for the dairy herd to produce abundant milk during the spring and early summer. A large part of every dairy farm, therefore, is under grass. But to keep up milk yields at other times, sometimes even in dry summers, additional feed must be provided. Much of this is obtained by growing forage crops. In Cheshire and all along the edges of the Pennine uplands the dairy farms consist mainly of permanent grass pastures with a few small fields of forage crops. In the dairy districts of the Midlands and of southern England and Scotland most of the fields are ploughed. Even the grass fields are ploughed up every few years and grown

23. FIVE IMPORTANT BREEDS OF CATTLE. Notice how the beef breeds differ in bulk from the milk breeds. The Shorthorn is a double-purpose breed.

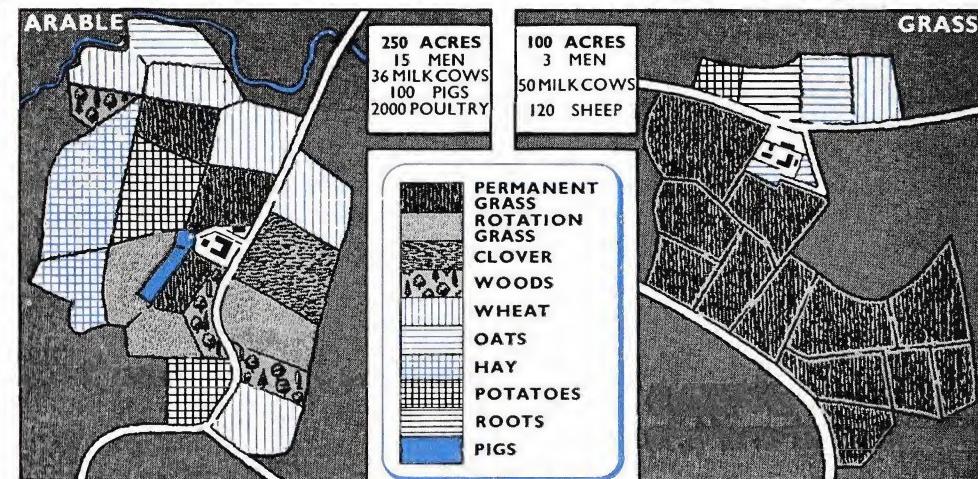


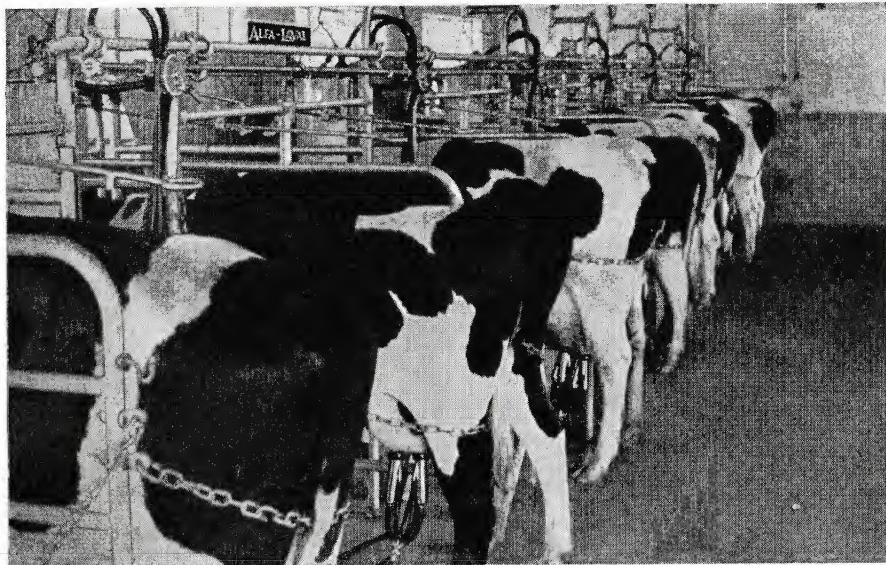
grain or root crops for a few seasons before being sown once more with grass seeds. This method improves the feeding qualities of the grass fields for it keeps down the number of weeds and of poorer grasses of little food value. Still, to the dairy farmer as to the beef producer, the most important crop on the farm is grass.

The dairy farm employs many more workers than the fattening farm. The cows must be milked morning and evening every day in the week. Milking machines have reduced the number of milkers needed, but there can be no half-holiday on Saturday or whole holiday on Sunday on the dairy farm. The cleaning of sheds and cattle takes a lot of time, and so does the collecting and cooling of the milk in the dairy. Rapid cooling and thorough cleanliness help to prevent milk from going sour and from being a carrier of disease germs.

In winter the milk cows have to be fed indoors. Hay must be fetched from the stack and roots must be brought from the store and chopped. These are fed in the right quantities to keep the cattle fit, along with "green food"—silage from store or kale cut in the fields. On the well-managed farm the milk yield of each cow is measured and recorded every day and its rations of grain and beans and cake are given accordingly.

24. FIELD PLANS OF AN ARABLE AND A GRASS FARM. Write down all the differences between them that you can discover. What does each raise (a) for use on the farm, (b) for sale?





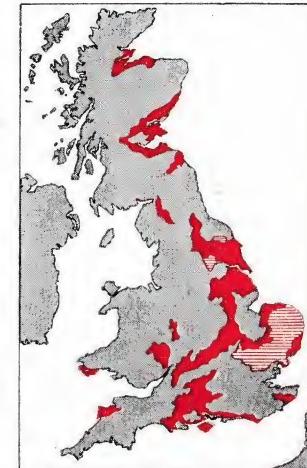
25. IN A MODERN MILKING PARLOUR. Note the cleanliness of the cows, the teat cups on their udders, the pipes carrying the milk to the dairy. Why are there no workers about?

Everybody knows that milk will go sour very soon, especially in warm weather. To sell fresh milk in the towns, where most people live, it must be got from the farm to the home as quickly as possible. That is why many dairy farms are found near big towns and industrial districts. Until railways and motors were invented, the milk from good grasslands far away from big towns could not be got to them quickly enough for drinking, but was turned into butter or cheese on the farm. When it became possible to bring butter and cheese cheaply from Denmark and Canada and New Zealand, these farms found it more profitable to sell their milk fresh. Nowadays butter and cheese are made in factories which use only the milk that is surplus, that is, left over after all the customers for fresh milk have been supplied. Where good pastures are available and rich milk is required for butter-making, you will find many cows of the Jersey and Guernsey breeds. They yield less milk than the other dairy types but their milk contains a higher proportion of butter fat.

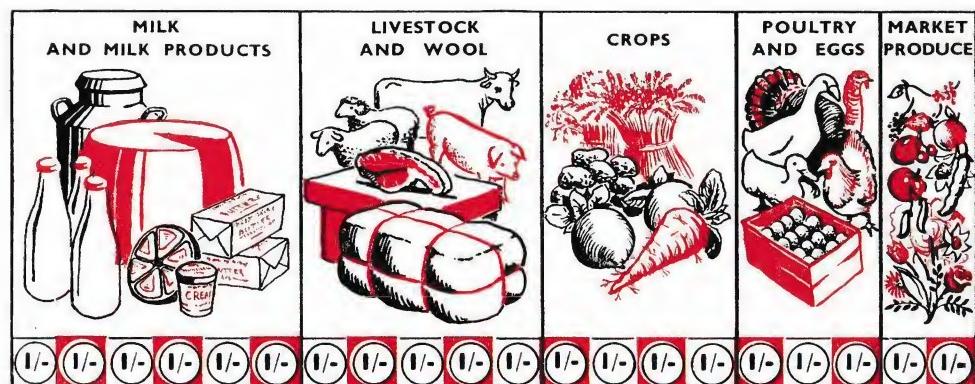
CROP LANDS

REARING and keeping animals to provide meat and milk is the most important part of British farming. The hill farming is mainly concerned with the rearing of stock, the grassland farmer with the fattening of beasts for slaughter, the dairy farmer with the production of milk. But on most British farms all three tasks are carried on to some degree. Thus the hill farmer sells to the butcher as well as to the fattener and may sell a little milk too, while the dairy farmer cannot keep up his milk supply without producing calves for the butcher or the fattener.

Most of these livestock farmers plough up some of their fields, sometimes to improve the grass, sometimes to produce grains and root crops for feeding to the animals, especially in winter. How much of the farm is ploughed varies a good deal from district to district. In the hillier, wetter and less fertile areas only one or two of the best fields will be ploughed; in the lower districts with a drier climate nearly all the farm may be regularly ploughed, either every year or on turn-about methods. But just as British



26. HOW THE BRITISH FARMER EARNS HIS LIVING. Animal products—from grass lands—are far more valuable than vegetable products—from cultivated lands. Can you name a country where the reverse would be true?



farms vary very much in the main purposes for which they keep livestock, so too they vary in the main crops they produce from the ploughlands. For these ploughlands, in addition to providing feed crops for animals, can also produce food crops for human beings. When the crops are used for animals they largely remain on the farm and the farmer's income comes from the sale of animals or their products. If the crops are for human food, he gets it by selling his "cash crops" off the farm.

What any ploughland can grow best depends on many factors, but especially on the soil and the climate. Some kind of grain is always one of the most valuable cash crops and wheat is especially so. It is possible to grow wheat in almost all parts of Great Britain, except on the mountains and high moors. Wheat was, in fact, the chief crop before the prairies of North America were turned into vast ploughlands producing wheat which could be sold more cheaply. Twice again, during the two World Wars, wheat was grown in almost all parts of Britain as the only way of maintaining bread supplies when its import was difficult.

But, though wheat *can* be grown in most parts of Britain, it is not to-day the most important ploughland crop, except in eastern districts. Two features of the wheat plant decide where it can be sown most profitably. It is a plant with deep roots, so it

27. These sheep on Salisbury Plain are being fattened on crops grown for that purpose.

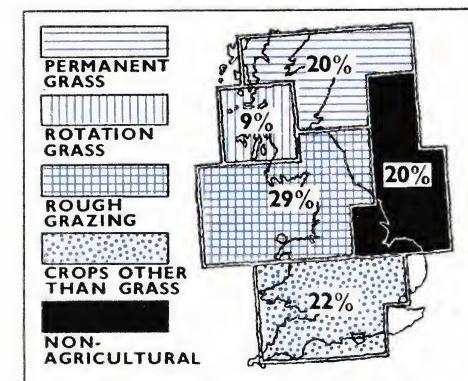


grows best on deep soils. Wheat also needs a good deal of sunshine to ripen fully and yield the hard grain that the flour millers like best. The richest wheat crops can be harvested where both these conditions are found. In Britain this is in the eastern Midland plain. Here there are deep loamy soils and enough sunshine for the grain to ripen properly. The drier the summer, the heavier is the wheat crop: look at Fig. 7. A rainfall map will show that these are also the districts which usually have less than thirty inches of rain in a year: look at Fig. 37.

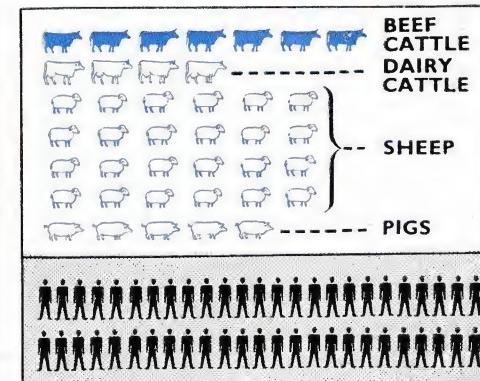
Barley is a grain that grows best where there is even less summer rain than suits wheat. It does well on thin and poorer soils. So the chief barley districts in Britain are also in the drier eastern and south-eastern districts, especially on the lighter soils of East Anglia and the thin soils of the chalk Downlands. Barley is not now used for making bread, but the best half of the crop goes to the brewers, while the rest is fed to animals. Wheat is almost entirely a cash crop, barley is partly a cash crop and partly a feeding crop.

The biggest grain crop over Britain as a whole is oats. It grows well on poor soils and in dull and rainy districts. In fact, oats give a poor yield if the summer is hot and may fail if the season is very dry. Thus the conditions that lead to poor crops of wheat and barley may produce good crops of oats. This explains why there are so many more fields of oats in Ireland, in Scotland, in

28. (a) The proportions in which the land of Britain is used.



(b) The number of cattle, sheep, and pigs for every 50 people in Britain.



Wales, and in northern and western England, than there are fields of wheat or barley. In Scotland about half the crop is used as oatmeal for making porridge and oatcakes, but elsewhere it is nearly all fed to livestock.

The growing of grain, especially of wheat, is now largely mechanized in Britain. The use of tractors has greatly lessened the heavy labour of manure-spreading, ploughing, sowing and harvesting, and so has cut down the wages bill of the grain farmer. Since machines can be used more easily and economically in large fields, mechanization has changed the look of the countryside in many districts. Hedges and small fields, and even many of the smaller farms, have vanished in the chief wheatlands. The great advantage of machines is the speed with which they enable jobs to be done. Ploughing a field, or harvesting it, now takes a few hours instead of days. The combine harvester can cut, thresh and bag a corn crop in less time than it used to take just to cut it. This also makes it much easier for the farmer to fit his programme of work to the very changeable weather of Britain.

The chief root crops in most parts of Britain are swedes, turnips and mangolds. They provide winter feed for livestock. Sheep may be "folded" on them, eating them as they stand in the field.

29. AN ENGLISH FARMER'S CALENDAR.

CROPS IN ORDER OF ROTATION												
	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
OATS	Ploughed		Sown					Harvested				Manured
POTATOES	Sold	Ploughed	Planted	Eartherd & Hoed	Sprayed			Lifted & Clamped			Sold	
WHEAT		Rolled		Fertiliser			Harvested		Sown	Sold		
ROOTS	Manured	Ploughed	Harrowed	Sown	Hoed					Lifted & Clamped or Folded		
BARLEY & CLOVER	Ploughed			Sown			Harvested	Barley Sold				
HAY	Rolled	Dressed		Haymaking						Land Cleaned		
SHEEP	Fat Ewes and Lambs Sold	Lambing	On Grass	Own Lambs on Clover	Hill Lambs Bought			Folded on Roots				
CATTLE	Fed in Yards	Sold Fat		Bought	On Clover and Grass		Sold Fat	Bought	Fed in Yards			
	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.

For cattle they are stored in clamps or pits and then chopped and fed to the beasts in the cowshed or stockyard.

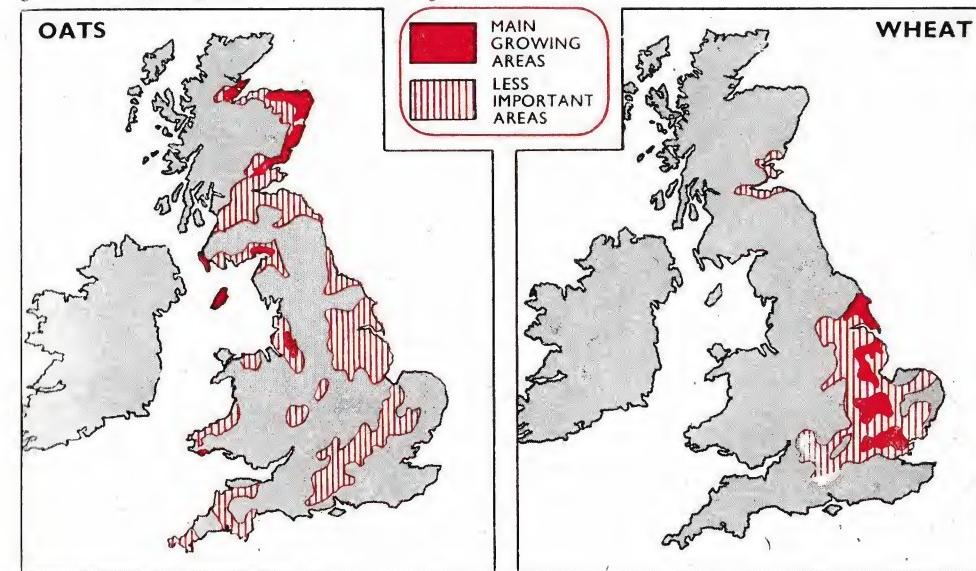
Sugar-beet is both a cash crop and a fodder crop. The more sunshine it gets, the bigger the proportion of sugar it stores in the root. The roots go to a sugar-beet factory where the sugar is extracted by crushing and boiling the roots. (Why do you think there are most sugar-beet factories in the eastern counties of England?) When the crop is lifted in the late autumn the green tops are cut off and left in the fields as feed for sheep or cattle.

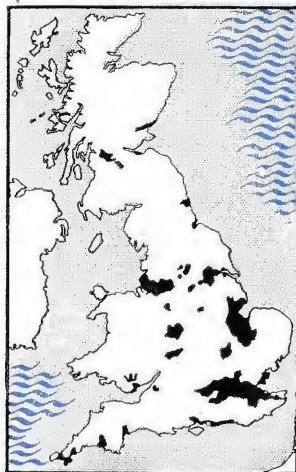
Every farmer must choose each year which of all these crops he will grow and in which fields he will sow them. His choice will be made partly according to whether he means to earn his living by keeping animals, in which case he will grow chiefly feed crops, or whether he means to earn it chiefly by selling cash crops. The balance he chooses, as between animals and cash crops and as between one crop and another, varies from farm to farm according to local conditions of weather and soil, nearness to markets, and the experience and skill of the farmer.

If you had been brought up on a Somerset farm and then went to work on a farm in Lincolnshire, what chief differences would you notice in the pattern of farming?

Examine Figs. 2, 30 and 37 before answering.

30. GRAIN CROPS. Pick out and explain the differences in distribution of wheat and oats.





SPECIALIZED FARMING

ON the moorland farms of Britain as much as ten acres of land may be needed to feed one sheep. One man with his wife and children may farm as much as a thousand acres. The average size of a British farm is under a hundred acres. But in some parts of the country twenty men may be employed on just a few acres and each of them yet make a better living than the hill farmer with his thousand acres. To do this they use much costly equipment and lots of fertilizers and specialize on only a few crops or even on just one crop. The amounts of food they produce are large in comparison with the size of the farms. Everything they produce is for sale.

The potato is one crop grown in very large quantities in a few areas. Though it is found everywhere in gardens and allotments, the most important districts for large scale potato-growing are

31. A WORCESTERSHIRE PEAR ORCHARD IN SPRING.



parts of the Fenlands round the Wash, south-west Lancashire, and the eastern parts of the Scottish Lowlands. The soil is rich and deep in these districts and as much as one-fifth of the land may be growing potatoes. Since the areas are all near big towns the cost of transport is kept down. The early new potato fetches higher prices and so can pay for carriage for longer distances, as from parts of Cornwall or the island of Jersey, where spring comes early.

In the chief potato districts, and still more in Cambridgeshire and Bedfordshire, other vegetables such as peas and beans, sprouts and lettuces are grown as field crops. These vegetable farms are large enough for machinery to be used. Expenditure on manures and fertilizers, on sprays to protect the crops from disease and insect pests, and on labour, are much higher than in general farming. But early and heavy crops repay the high costs.

When similar crops are grown on a smaller scale the farm is known as a market garden. Here a larger variety of crops is usual as the cultivator cannot face the risk of a total failure of an only crop. Careful planning is needed to secure a succession of crops throughout the year and to get them to market while prices are still high. Since the vegetables grown are handled in smaller quantities, greater care can be given to their selection and to getting them to market in fresher condition than the field crops. Most towns are surrounded by a ring of market gardens, crowding close to save the cost of carriage on their produce. The Vale of

32. GLASSHOUSE CULTIVATION. The soil is warmed by buried electric cable. The crop can be sprayed from water pipes overhead.





33. FARM IN EAST LOTHIAN. The stacks and fields show that much land is under crops; the roofed buildings shelter cattle for winter fattening.

34. BULB GROWING IN LINCOLNSHIRE. A tulip field in bloom at Spalding.



Evesham and the market gardens of Middlesex and Essex, of South Yorkshire and Lanarkshire, all benefit from their nearness to big town markets. The scattered market garden areas of Cornwall and Devon can only compete with other districts because of their mild winters and early springs. They can put their crops on the London market a week or two before other districts and send flowers—violets and anemones and daffodils—when there are practically no other flowers available.

Crops grown in glasshouses are also early in the market and suffer less from weather damage, though they cost more to raise. A thousand acres of land are under glass in the Lea valley north of London, and a large part of the island of Guernsey is covered by glass. The most important glasshouse crop is the tomato.

Fruit-growing is one of the most specialized forms of farming. In the most important areas—Kent and Worcestershire—it has been carried on for centuries. Fruit trees yield little or no return for some years after planting—four years for apples and plums, fifteen years for cherries—and the crops vary greatly from year to year, late frosts causing great damage. Planting an orchard is therefore a costly and risky business. In the rainier western counties the ground between the orchard trees is used only as grass pasture for sheep or as runs for pigs or poultry. Elsewhere, in the first few years, the orchard is often planted with bush fruits,

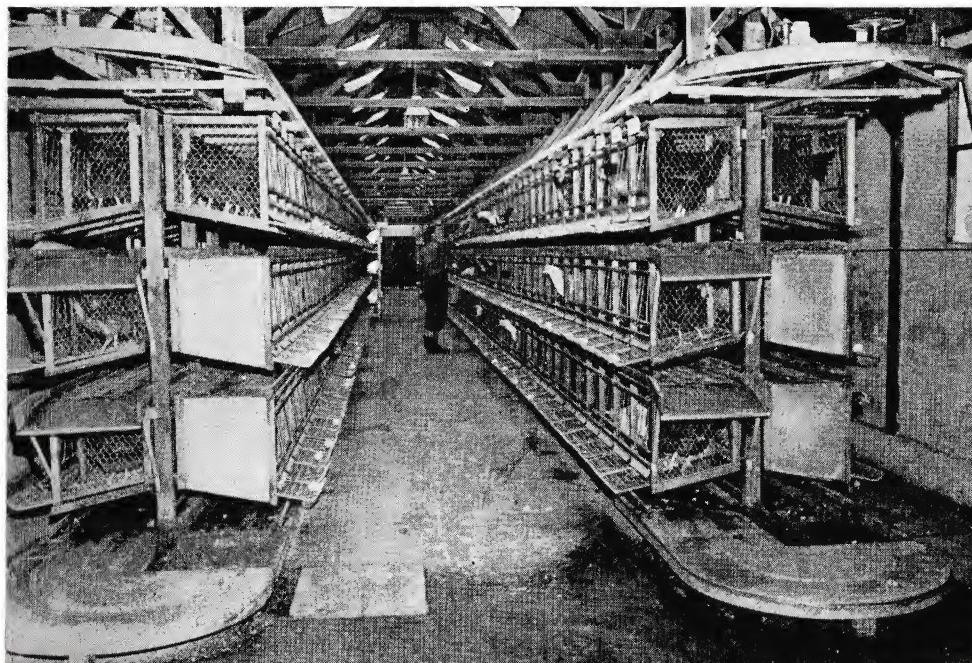
35. DAFFODILS IN THE SCILLY ISLES. Picking blooms for market in early March.



or soft fruits, or with rows of early vegetables. By planting other crops the orchard owner avoids losing so much money in bad years when his tree crop fails, and he also provides work for his men at times when the trees call for little labour. Pruning and spraying in winter and early spring are the main orchard tasks. Gathering the ripe fruit always calls for extra labour. About a quarter of the orchards of England are found in north Kent, while Worcestershire and neighbouring counties provide another quarter. Parts of Essex and Norfolk and the Fenlands are also important, and there are cider-apple orchards in Somerset, Devon and Herefordshire.

Specialized farming does not always take the form of crop growing. In recent years especially, many pig and poultry farms have been started, though it is still true that most of the home-produced eggs, table poultry, and pigs, are raised on the general farm. The pigs and the birds are carefully bred and selected according to whether porkers or bacon pigs, eggs or table birds, are most desired. In both cases the animals spend most of their lives under cover and are fed on carefully measured and balanced

36. BATTERY CAGES ON A POULTRY FARM. The hens spend their laying lives in these, with food and water brought on travelling belts. The system saves much labour and ground space. Why is it quick work to collect the eggs?



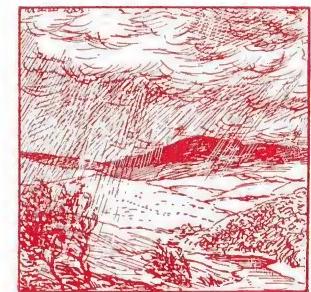
rations of food. Any well-drained land is suitable for such a farm, but sites close to towns enable waste human food to be used as animal food as well as reducing the cost of transport of produce to market. Staffordshire and Yorkshire are important counties for pig products, while there are more hens than people in Lancashire! Aylesbury in Buckinghamshire has long been famous for its ducks and Norfolk and Suffolk for turkeys.

What advantages are there in specialized farming? If you owned a farm, what would you have to think about very carefully before you decided to specialize?

WEATHER AND THE FARMER

NO one, except perhaps the sailor, is more concerned with the weather than is the farmer. Whatever animals or crops he seeks to raise, his success in any year largely depends on the weather. Now the weather over Britain, except for short periods, comes from the southwest. The wind blows most frequently from some western or south-western direction. So the air that is over Britain at any time was most probably over the Atlantic Ocean a few hours earlier. It will therefore be damp air, and will also be rather cooler in summer and warmer in winter than the air over inland countries of Europe. These damp and mild conditions suit the growing of grass and thus help to explain the importance of livestock farming in Britain.

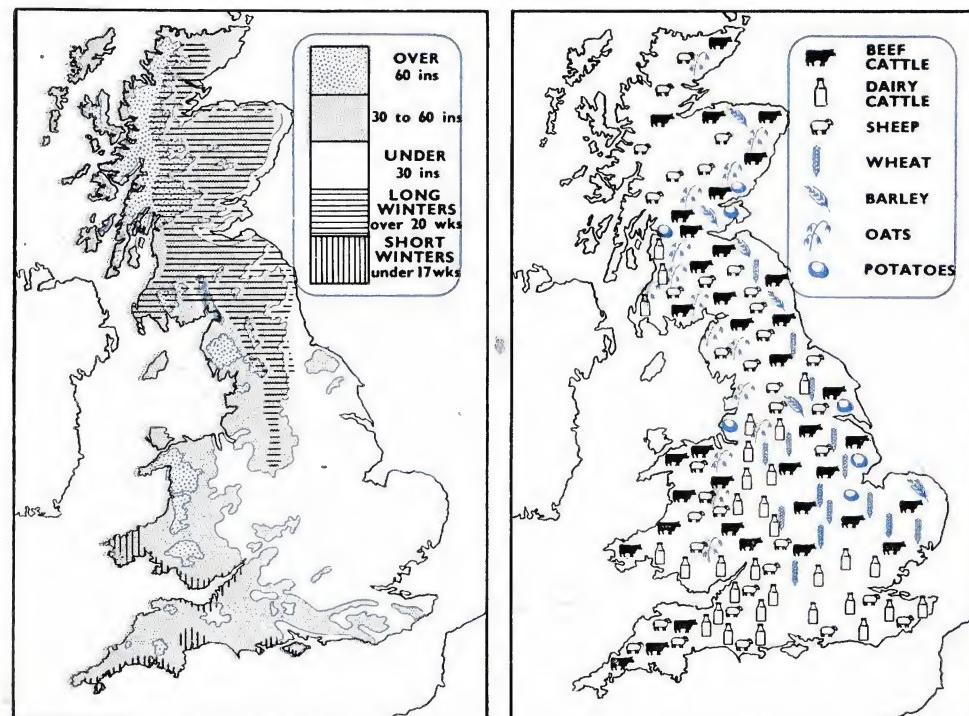
Everyone knows that British weather is very changeable. It varies from day to day and sometimes from hour to hour. This is very important to the farmer, especially to the grower of grain. A rainy June will make a difficult hay harvest, but a wet August or September may nearly ruin a wheat crop. Still, this changeable weather is not altogether a bad thing. It is seldom so bad



that any crop fails completely. The farmer will get some yield from his wheat field, even if he gets less than he expected and has more difficulty in gathering it. The livestock farmer suffers when a dry early summer causes little growth in the grass, but his animals never suffer severely from drought.

The distribution of rain over the country is one of the main things that determines how the land can best be used. The western and south-western winds from the Atlantic first meet the most mountainous parts of Britain. As the winds rise over the high uplands the water vapour in the air quickly turns to clouds and these give up much of their moisture as rain. Thus Wales has more rain than East Anglia, Cornwall more than Kent, Cumberland more than Durham, Ayrshire more than the Lothians. The western highlands have more than 60" of rain in an

37. THE WEATHER AND THE FARM. Try to pair off weather conditions and farm produce, thus: Low rainfall—wheat and barley; long winter—sheep.

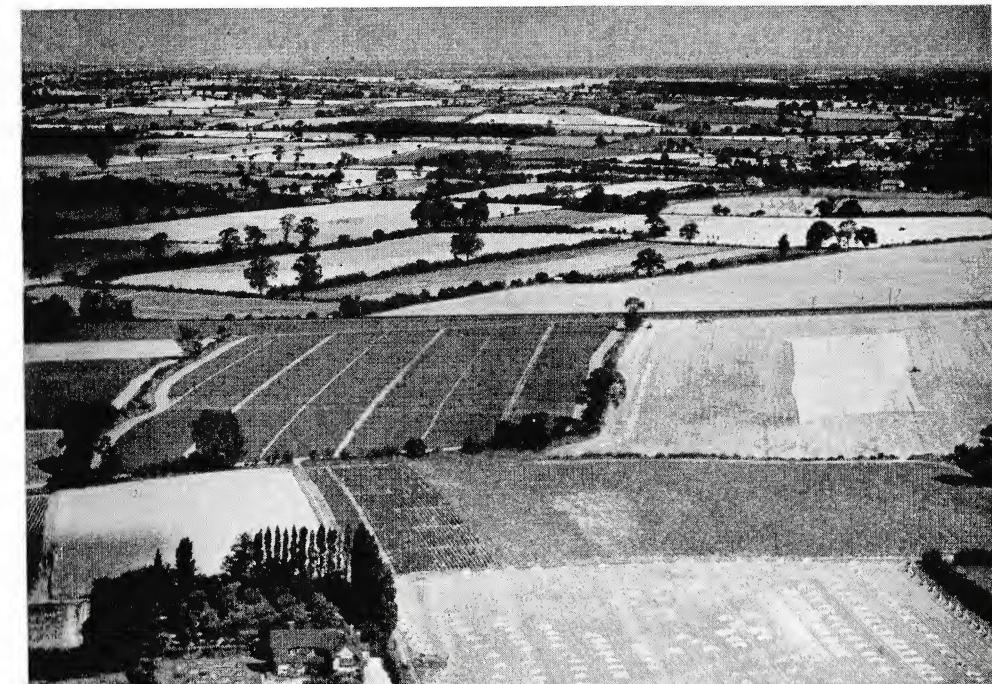


average year, the eastern lowlands near the North Sea less than 30". Only these latter areas are, therefore, really suitable for the growth of wheat and barley. The rainier areas are not even very good for grass, since the heavy rain washes the goodness out of the soil and the clouds rob the pastures of warmth and sunshine. The best pasture districts are those where the rainfall is between 30" and 60" a year, whereas in such districts the farmer knows that he cannot depend on corn crops, though they are often successful. But oats and root crops do well in these middle areas.

Warmth has less influence on crops than rainfall. In any case it does not vary much throughout the island, though the south has nearly always a warmer and longer growing season than the north. No part of Britain, however, is far from the sea, so there are rarely very high or very low temperatures for many days at a time. Actually the height of the land has most effect on temperatures in Britain, and crops will not ripen on the hills. The "moorland edge" everywhere comes at about 600 to 800 feet above sea-level.

Why has a British farmer nearly always some excuse to grumble about the weather?

38. ESSEX FARMLANDS IN AUTUMN. Note the high proportion of croplands; the well-to-do farmhouse with its wind break and orchard; the lack of storage, showing that the varied crops are sold off the farm; the big square fields suiting machine cultivation.



THE FARMER AND THE NATION

FARMING is one of the most important British occupations and certainly the oldest. In very early days almost every man had to be a farmer, for there was practically no other way of obtaining a steady supply of food for himself and his family. There are now many other ways of earning a living but there are still about a million

people who do so by working on British farms. These farmers and agricultural workers produce much of the food that the fifty million people in the country eat. They can no longer provide all that is needed, but if one tries to write down all that they supply it makes a very long list—meat and milk and eggs, grain for bread and porridge and beer, sugar from the beet, potatoes and vegetables and fruit.

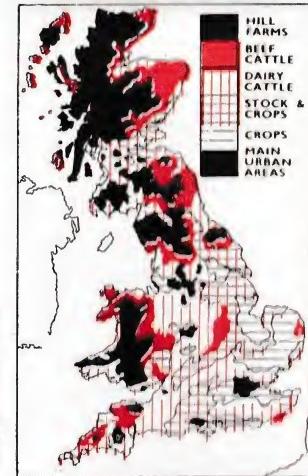
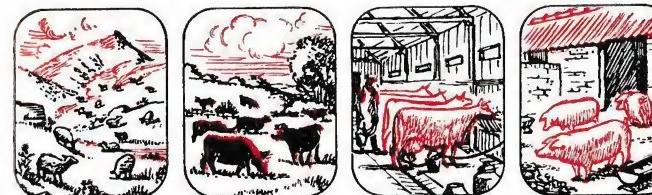
Britain has to buy from countries overseas three-quarters of the wheat and flour and sugar she needs, over half the meat and nearly half the bacon, nearly all the butter and most of the cheese she eats. The bigger the output of home farms, the less has to be paid out for these imports and their transport. The better the quality of the stock in Britain, the bigger are the sales of breeding animals to other countries.

The farmer is not only important as a provider of food; he is also important as a customer for the products of industry. British farming is the most highly mechanized in the world and quite a big industry has grown up to supply the tractors and harvesters, ploughs and milking machines, harrows and potato-lifters and other agricultural implements. Making fertilizers for the soil and sprays for use against disease and insect pests are other large businesses. Agricultural Shows display what a farmer wants to buy as well as what he has for sale.



THE SUMMING UP

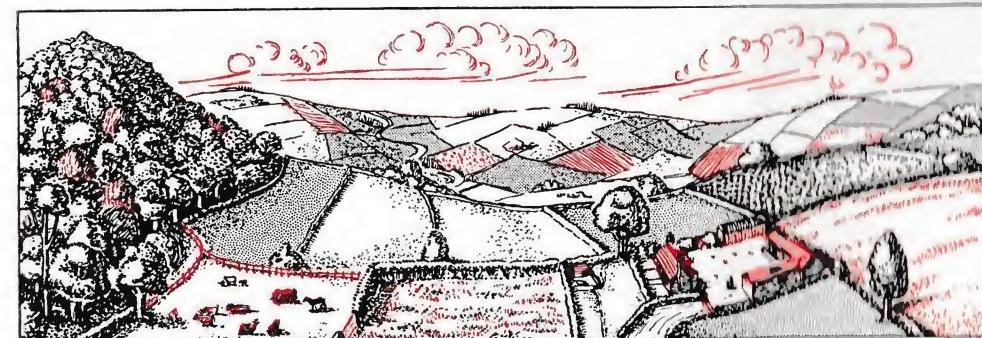
About three-fifths of all the land of Britain is divided into fields in which the land is cultivated for the growth of crops and the pasturing of animals. Another one-third, mainly rough moorlands, is used for the feeding of sheep and young cattle. The farms provide much, though not all, of the food the people need.



The hill farmers grow a little hay, feed sheep and raise young cattle. Many of these animals are fattened on the good grass pastures and root crops of the lowlands before slaughter.



Milk is now the chief product of the grass farms. The ploughlands are in eastern Britain, the driest and sunniest part. Wheat, barley and oats, with potatoes and roots, are the principal crops. Orchards and market gardens share the best soils and the best climates.





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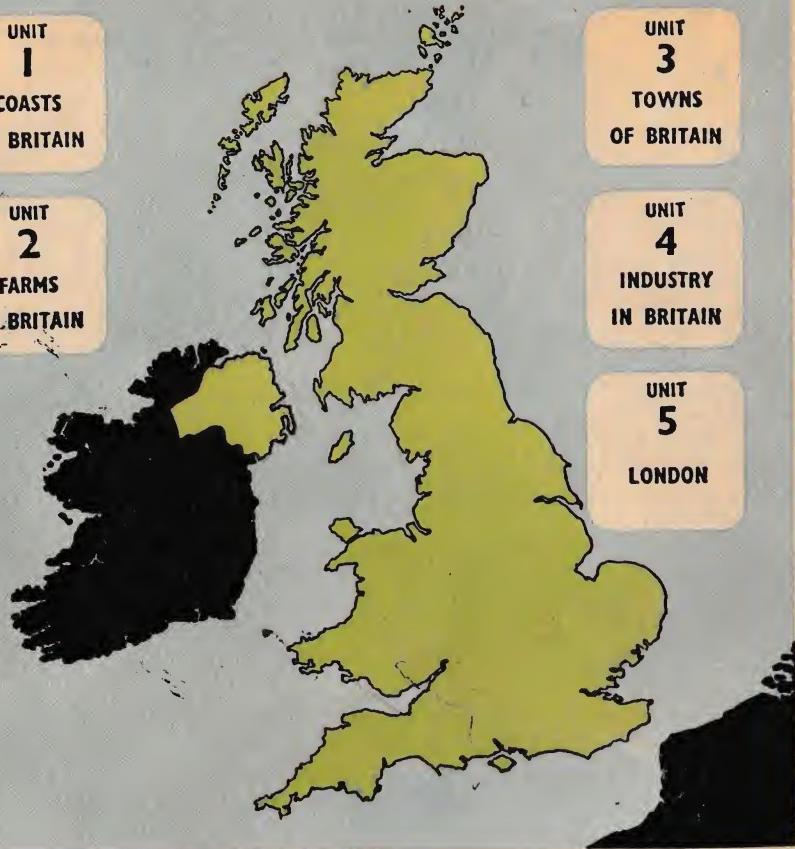
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